IN THE CLAIMS

Please amend the claims as shown below.

1. (Previously Presented) A modified thermostable DNA polymerase obtained from *Pyrococcus* or *Thermococcus* genus having a 3'-5' exonuclease activity, wherein the modification is the replacement of histidine (H) by another amino acid in the DIETLYH or DIETFYH sequence (D: aspartic acid, I: isoleucine, E: glutamic acid, T: threonine, L: leucine, F: phenylalanine, Y: tyrosine, H: histidine) within the exonuclease I region of the thermostable DNA polymerase.

2. (Previously Presented) The modified thermostable DNA polymerase according to claim 1, wherein in the DIETLYH or DIETFYH sequence, histidine (H) has been replaced by an amino acid selected from the group consisting of aspartic acid, glutamic acid, tyrosine, alanine, lysine and arginine.

3. (Original) The modified thermostable DNA polymerase according to claim 1 having the following physicochemical properties:

(1) DNA extension rate: at least 20 bases/second; and

(2) thermostability: it is capable of retaining 10% or more DNA polymerase activity of untreated DNA polymerase at pH 8.8 (determined at 25°C) after treatment at 95°C for 6 hours.

4. (Currently Amended) A modified thermostable DNA polymerase having a 3'-5' exonuclease activity and the following physicochemical properties:

(1) DNA extension rate: at least 30 bases/second;

(2) thermostability: the modified thermostable DNA polymerase being capable of retaining 40% or more DNA polymerase activity of untreated DNA polymerase at pH 8.8 (determined at 25°C) after treatment at 95°C for 6 hours; and

(3) amino acid sequence: the modified thermostable DNA polymerase comprising an amino acid sequence of SEQ ID NO:2 except that the amino acid sequence located at the 141- to 146-positions of SEQ ID NO:2 is ~~selected from~~ DIETLY ~~or DIETFY~~ and histidine (H) at the 147-position of SEQ ID NO:2 has been replaced by another amino acid.

5. (Previously Presented) The modified thermostable DNA polymerase according to claim 4 having the following thermostability: it is capable of retaining 60% or more DNA

polymerase activity of untreated DNA polymerase at pH 8.8 (determined at 25°C) after treatment at 95°C for 6 hours.

6. (Previously Presented) The modified thermostable DNA polymerase according to claim 5, wherein histidine (H) at the 147-position has been replaced by an amino acid selected from the group consisting of aspartic acid, glutamic acid, tyrosine, alanine, lysine and arginine.

7. (Previously Presented) The modified thermostable DNA polymerase according to claim 6, wherein histidine (H) at the 147-position has been replaced by aspartic acid.

8. (Previously Presented) The modified thermostable DNA polymerase according to claim 6, wherein histidine (H) at the 147-position has been replaced by glutamic acid.

9. (Previously Presented) The modified thermostable DNA polymerase according to claim 6, wherein histidine (H) at the 147-position has been replaced by tyrosine.

10. (Previously Presented) The modified thermostable DNA polymerase according to claim 6, wherein histidine (H) at the 147-position has been replaced by alanine.

11. (Previously Presented) The modified thermostable DNA polymerase according to claim 6, wherein histidine (H) at the 147-position has been replaced by lysine.

12. (Previously Presented) The modified thermostable DNA polymerase according to claim 6, wherein histidine (H) at the 147-position has been replaced by arginine.

13-24. (Canceled)

25. (Previously Presented) A reagent kit for amplifying nucleic acid, which comprises 2 kinds of primers, each of the primers being complementary to a DNA extension product of the other primer; dNTP; the thermostable DNA polymerase of claim 1; divalent ion(s); monovalent ion(s); and a buffer solution.

26. (Previously Presented) A reagent kit for amplifying nucleic acid, which comprises 2 kinds of primers, each of the primers being complementary to a DNA extension product of the other primer; dNTP; the thermostable DNA polymerase of claim 1; magnesium ion; at least one

of monovalent ions selected from the group consisting of ammonium ion and potassium ion; BSA (bovine serum albumin); a nonionic surfactant and a buffer solution.

27. (Previously Presented) A reagent kit for amplifying nucleic acid, which comprises 2 kinds of primers, each of the primers being complementary to a DNA extension product of the other primer; dNTP; the thermostable DNA polymerase of claim 1; magnesium ion; at least one of monovalent ions selected from the group consisting of ammonium ion and potassium ion; BSA (bovine serum albumin); a nonionic surfactant; a buffer solution and an antibody capable of suppressing at least one activity selected from polymerase activity and 3'-5' exonuclease activity of the thermostable DNA polymerase.

28. (Previously Presented) A DNA polymerase composition which comprises one or more kinds of modified thermostable DNA polymerases defined in claim 1.

29. (Canceled)

30. (Previously Presented) A reagent kit for producing a mutated DNA which comprises mutagenesis primers, dNTP and the thermostable DNA polymerase of claim 1.

31. (Canceled)

32. (Previously Presented) A modified thermostable DNA polymerase according to claim 1 wherein said DNA polymerase is an α-like DNA polymerase.

33-35. (Canceled)

36. (Previously Presented) A modified thermostable DNA polymerase according to claim 1 wherein the histidine (H) has been replaced by an acidic amino acid to obtain the modified thermostable DNA polymerase having significantly reduced 3'-5' exonuclease activity as compared with the enzyme before modification.

37. (Previously Presented) A modified thermostable DNA polymerase according to claim 1 wherein the histidine (H) has been replaced by a neutral amino acid to obtain a modified thermostable DNA polymerase having improved amplifying efficiency.

38. (Previously Presented) A modified thermostable DNA polymerase according to claim 1 wherein the histidine (H) has been replaced by a basic amino acid to obtain a modified thermostable DNA polymerase having significantly improved 3'-5' exonuclease activity and/or fidelity on a DNA replication or amplification.

39. (Previously Presented) The modified thermostable DNA polymerase according to claim 1, wherein the histidine (H) has been replaced by an acidic amino acid to obtain the modified thermostable DNA polymerase having improved PCR amplifcation efficiency from low copy number of template DNA.

40. (Previously Presented) The modified thermostable DNA polymerase according to claim 1, wherein the histidine (H) has been replaced by an acidic amino acid to obtain the modified thermostable DNA polymerase having improved PCR amplifcation efficiency from a long DNA segment.

41. (Previously Presented) The modified thermostable DNA polymerase according to claim 1, wherein the histidine (H) has been replaced by a neutral amino acid to obtain the modified thermostable DNA polymerase having improved PCR amplifcation efficiency from low copy number of template DNA.

42. (New) A modified thermostable DNA polymerase having a 3'-5' exonuclease activity, wherein the modification is the replacement of histidine (H) by another amino acid in the DIETLYH or DIETFYH sequence (D: aspartic acid, I: isoleucine, E: glutamic acid, T: threonine, L: leucine, F: phenylalanine, Y: tyrosine, H: histidine) within the exonuclease I region of a thermostable DNA polymerase, the origin of the thermostable DNA polymerase being modified is the *Pyrococcus* or *Thermococcus* genus.